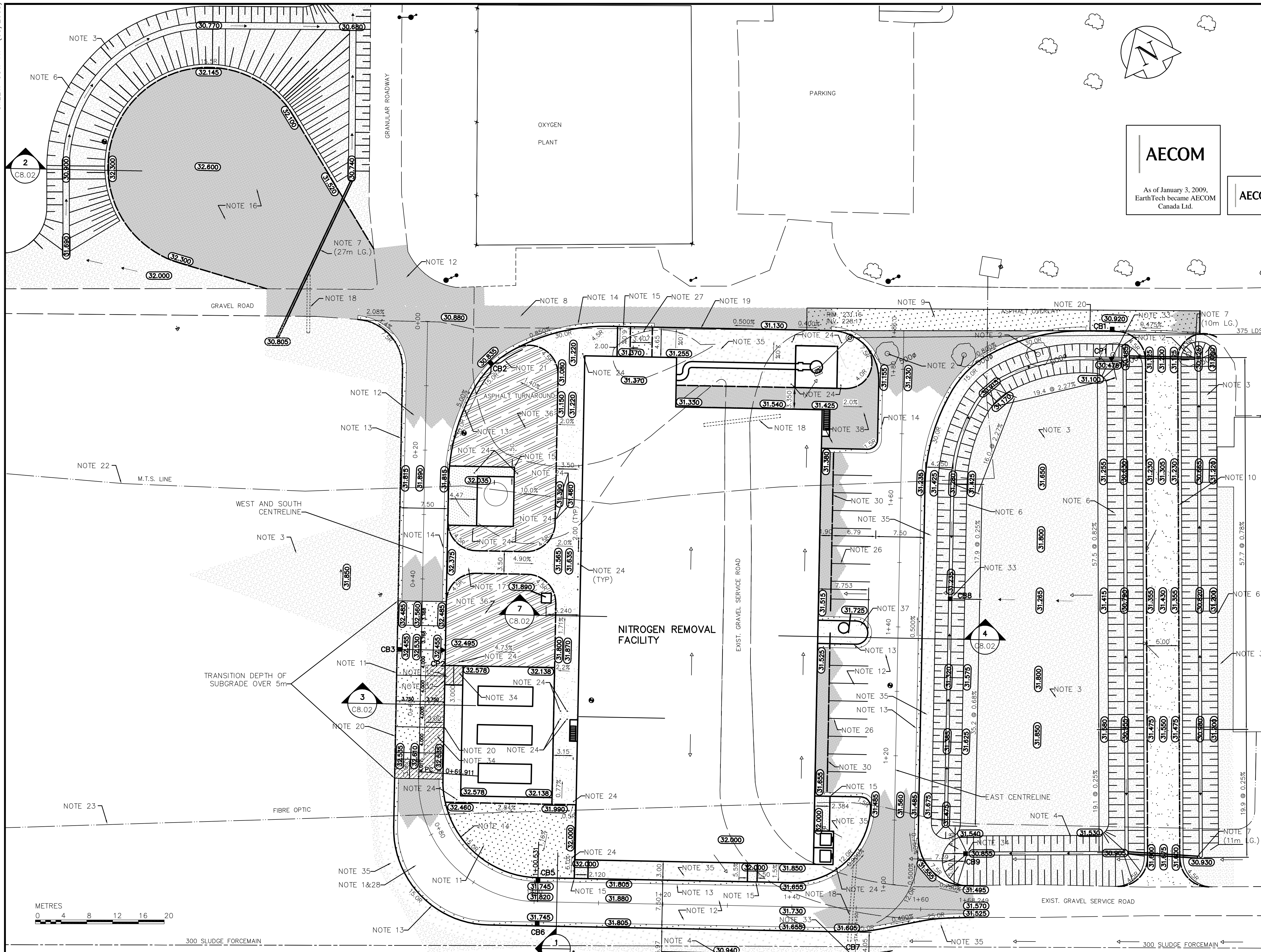


# **Appendix B**

## **Existing Pavement Details**



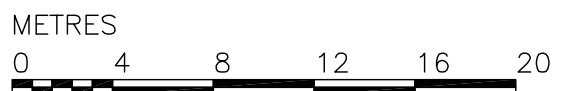
AECOM

As of January 3, 2009,  
EarthTech became AECOM  
Canada Ltd.

AECOM AS-CONSTRUCTED

SIG. \_\_\_\_\_ DATE \_\_\_\_\_

- REFERENCE NOTES**
- A. LEGAL PLAN - L.B.I.S.
  - B. ADD 200.000 TO OBTAIN GEODETIC DATUM.
  - C. PAVEMENT DIMENSIONS ARE TO BACK OF CURB.
  - D. FOR SITE UTILITY INFORMATION SEE DWG C2.01.
- CONSTRUCTION NOTES:**
1. REMOVED EXISTING TOPSOIL WITHIN LIMITS OF NEW PAVEMENTS AND DITCHES.
  2. REMOVED EXISTING TREE.
  3. SUPPLIED AND PLACED IMPORTED TOPSOIL AND SEED.
  4. REGRADED EXISTING DITCH.
  5. PLACED SUITABLE SITE SUBGRADE MATERIAL AS REQUIRED.
  6. EXCAVATED AND GRADED NEW DITCH.
  7. SUPPLIED AND INSTALLED 300Ø CSP CULVERT.
  8. PLANNED AND CONSTRUCTED NEW ASPHALTIC CONCRETE OVERLAY.
  9. CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT c/w ASPHALTIC CONCRETE OVERLAY.
  10. CONSTRUCTED NEW 3% CROWNED GRAVEL ACCESS ROAD (20mm LESTONE, 150mm THICK). EMBANKMENT CONSTRUCTED WITH SUITABLE SITE FILL MATERIAL.
  11. CONSTRUCTED NEW 200mm REINFORCED CONCRETE PAVEMENT.
  12. CONSTRUCTED NEW 100mm ASPHALTIC CONCRETE ROADWAY.
  13. INSTALLED NEW BARRIER CURB AND GUTTER (150mm HEIGHT).
  14. INSTALLED NEW LIP CURB AND GUTTER (75mm HEIGHT).
  15. CONSTRUCTED NEW 100mm CONCRETE SIDEWALK.
  16. CONSTRUCTED NEW 100mm ASPHALTIC CONCRETE TURNAROUND.
  17. CONSTRUCTED NEW 150mm THICK-20mm DOWN LESTONE SURFACE
  18. REMOVED EXISTING 450mmØ CULVERT.
  19. REMOVED EXISTING LIP CURB AND CONSTRUCTED NEW BARRIER CURB (DOWELLED).
  20. CONSTRUCTED BARRIER CURB (SEPARATE, 150mm HEIGHT).
  21. INSTALLED 150mm SUBRAIN.
  22. MTS LINE RELOCATED (BY OTHERS). CONTRACTOR WAS RESPONSIBLE FOR PROTECTING POWER CABLE TO COMMUNICATIONS TOWER DURING CONSTRUCTION.
  23. FIBRE OPTIC CABLE RELOCATED (BY OTHERS). CONTRACTOR WAS RESPONSIBLE FOR PROTECTING FIBRE OPTIC CABLE TO COMMUNICATIONS TOWER PRIOR TO RELOCATION.
  24. INSTALLED BOLLARD (SEE DETAIL 6, DWG C8.02)(24 IN TOTAL)
  25. CONSTRUCTED CONCRETE MEDIAN SLAB.
  26. PAINTED PARKING LINES YELLOW (2.75m TYPICAL SPACING).
  27. CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT.
  28. PROOF ROLLED SUBGRADE IN PROPOSED PAVEMENT AREAS.
  29. CONSTRUCTED 50mm ASPHALT PAVEMENT c/w 20mm LESTONE BASE COURSE (100mm THICK).
  30. INSTALLED PRECAST PARKING CURB.
  31. CONSTRUCTED NEW GUTTER SECTION.
  32. INSTALLED NEW LIP CURB (75mm HEIGHT, INTEGRAL).
  33. INSTALLED BOULEVARD CATCHBASIN PAD (SEE DETAIL 5, DWG C8.02).
  34. APPLIED SURFACE PROTECTION WITH COATING FORMULA 30.
  35. SUPPLIED AND PLACED IMPORTED TOPSOIL AND SOD.
  36. LEFT AREA IN ROUGH GRADED STATE.
  37. PLATE COMPACTED 19mm CRUSHED LESTONE TO 100% STANDARD PROCTOR DENSITY TO WITHIN 100mm TOP OF MEDIAN CURB. THEN PLACED A PROPEX 86I (OR EQUIVALENT) NON-WOVEN GEOTEXTILE UNDER 100mm OF 25mm CLEAN CRUSHED LESTONE.
  38. CONSTRUCTED NEW 50mm ASPHALTIC CONCRETE ACCESS ROAD c/w 20mm LESTONE BASE COURSE (150mm THICK).



**METRIC**  
WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

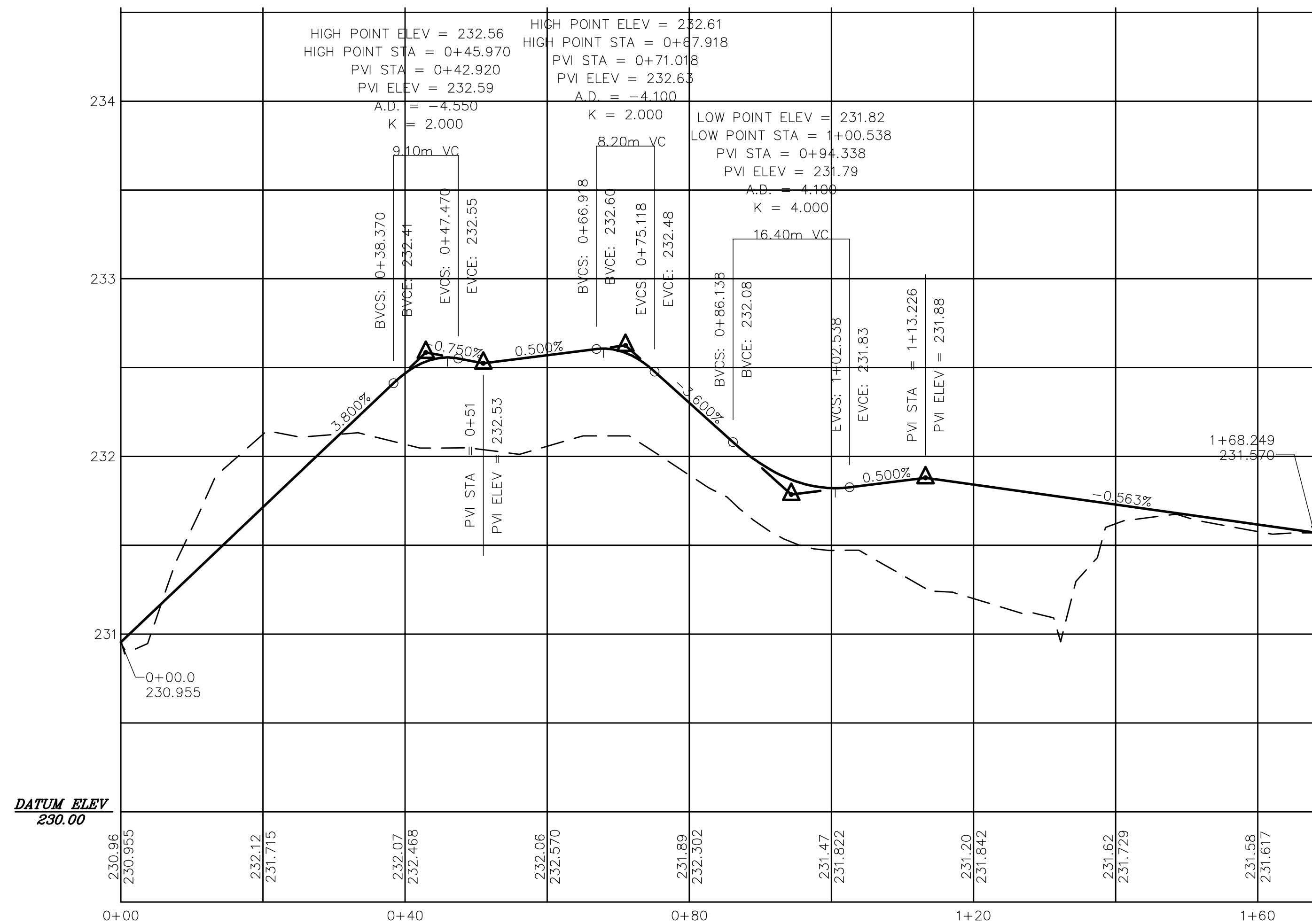
150 mm W.M.	WATERMAIN	150 mm W.M.	HYDRO	M.T.S.	LIGHT STANDARD
◇	HYDRANT	+	---	---	ANCHOR
○	VALVE	○	---	---	POLE
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.	---	---	CONTOURS
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.	---	---	RAIL X-ING SIGNAL
○	MANHOLE	+	---	---	@ RAILWAY TRACK
□	CATCH BASIN	●	---	---	DITCH
▽	CURB INLET	▼	---	---	FENCE
ANODE		---	---	---	
---	CULVERT	---	---	---	
---	GAS	---	---	---	
---	EXISTING	---	---	---	LEGEND - PLAN
---	LEGEND - PLAN	---	---	---	PROPOSED

13-02/ W side Main St. on the grounds of the North End Treatment Plant, 1411 on top of conc. pit in front of main bldg, 22.3m E. of line of most Ely. wall @ 32.8m S. of most Nly. wall of main bldg. (tie to 1411) ELEV. = 231.261m

**AECOM**  
Certificate of Authorization  
AECOM Canada Ltd.  
Original dated on:  
No. 4671 Date: 2010/04/30

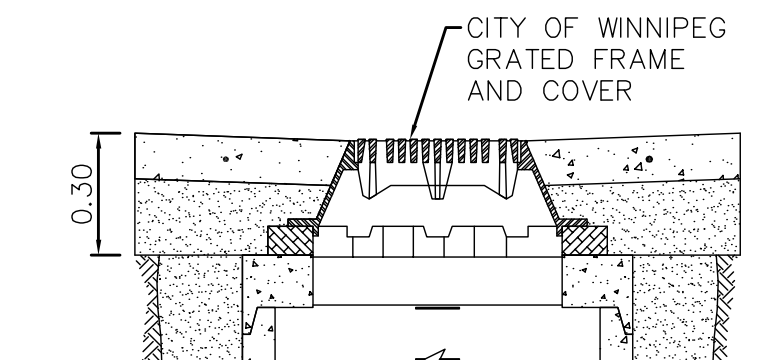
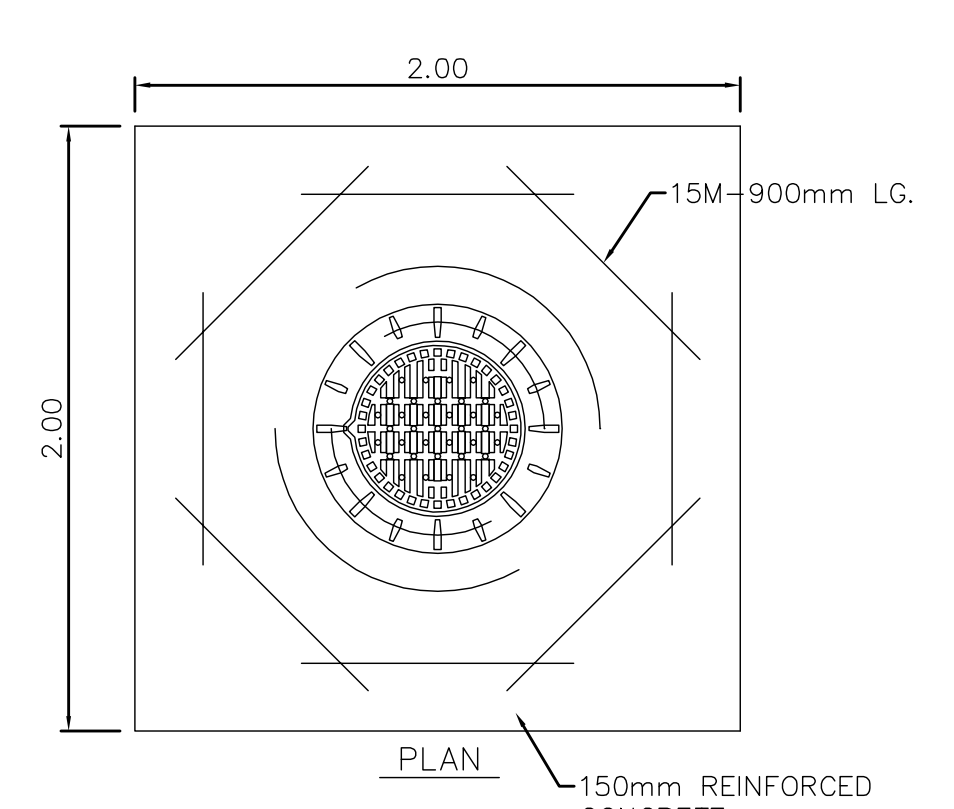
<b>AECOM</b>	DESIGNED BY BSK	CHECKED BY JC	DRAWN BY BSK/RTC	APPROVED BY JEH	RELEASED FOR CONSTRUCTION BY: K.MARTENS
	SCALE: 1:300				
	DATE 2006/04/17	DATE 2006/05/15			

ENGINEER'S SEAL	ORIGINAL SIGNED BY J.N. CRANG	2006/05/15	CONSULTANT DRAWING NO. C8.01	<b>THE CITY OF WINNIPEG</b> WATER AND WASTE DEPARTMENT ENGINEERING DIVISION	NEWPCC CENTRATE NUTRIENT TREATMENT NITROGEN REMOVAL FACILITY
				CIVIL PAVING AND GRADING PLAN	CITY FILE NUMBER SHEET OF CITY DRAWING NUMBER <b>1-0101C-C0009-001-03</b>

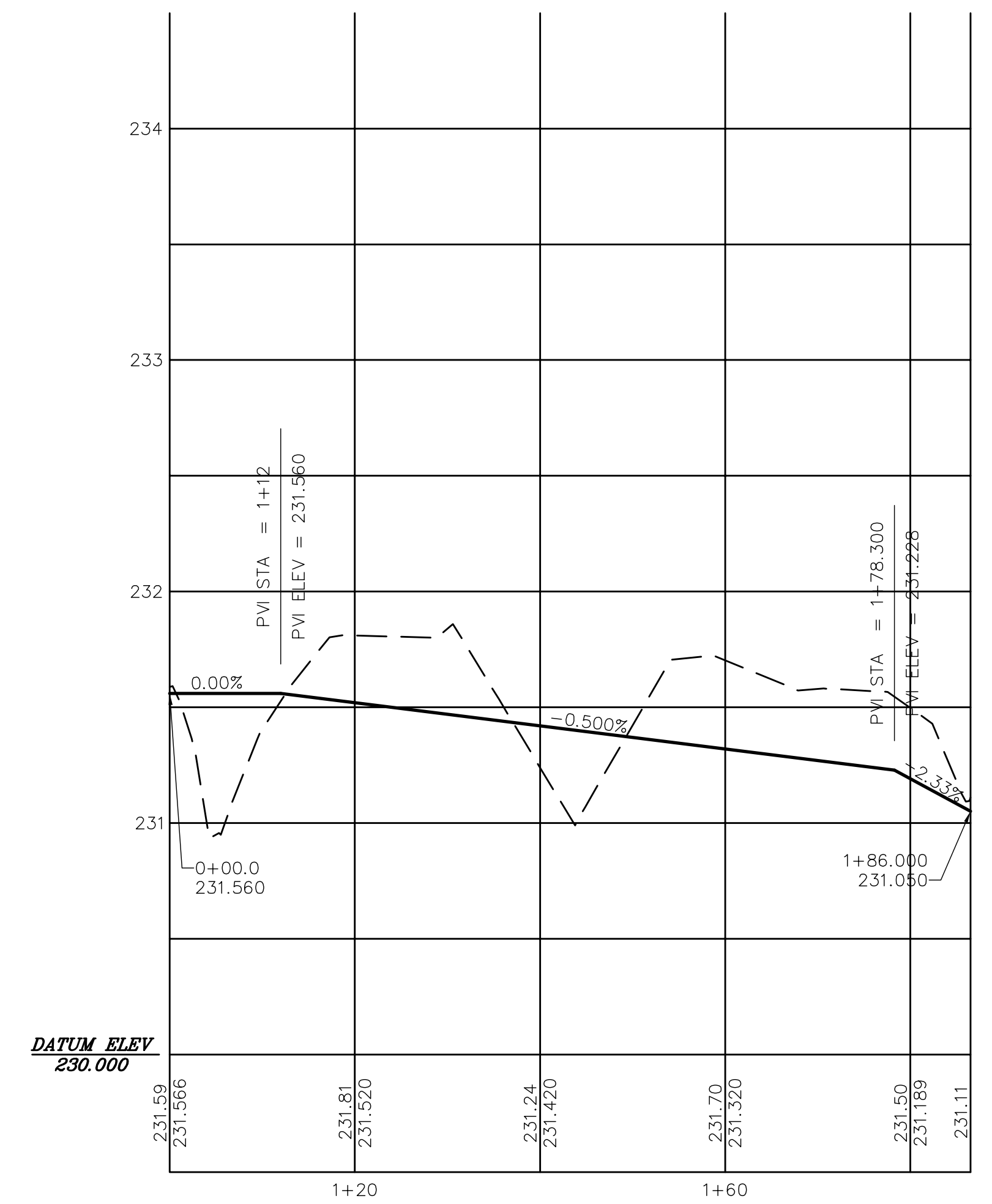


**WEST AND SOUTH ROADWAY CENTRELINE PROFILE**

SCALE: 1:500H, 1:20V

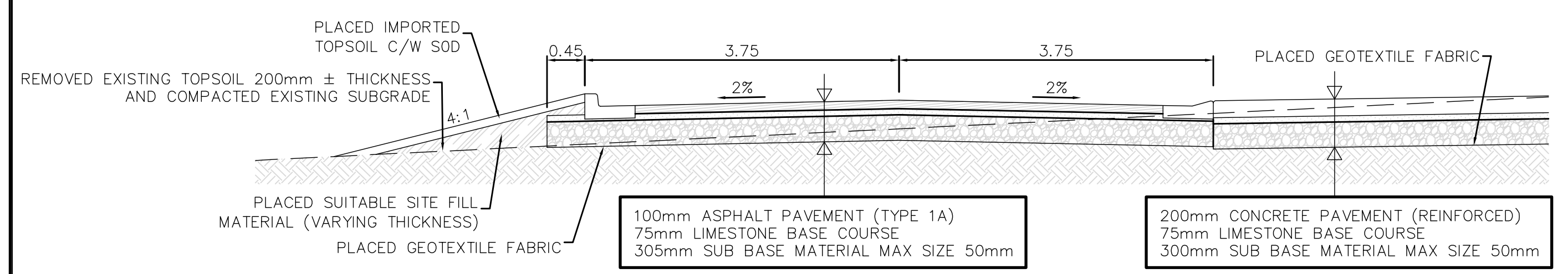


**5 BOULEVARD CATCHBASIN DETAIL**  
C8.01 SCALE 1:25

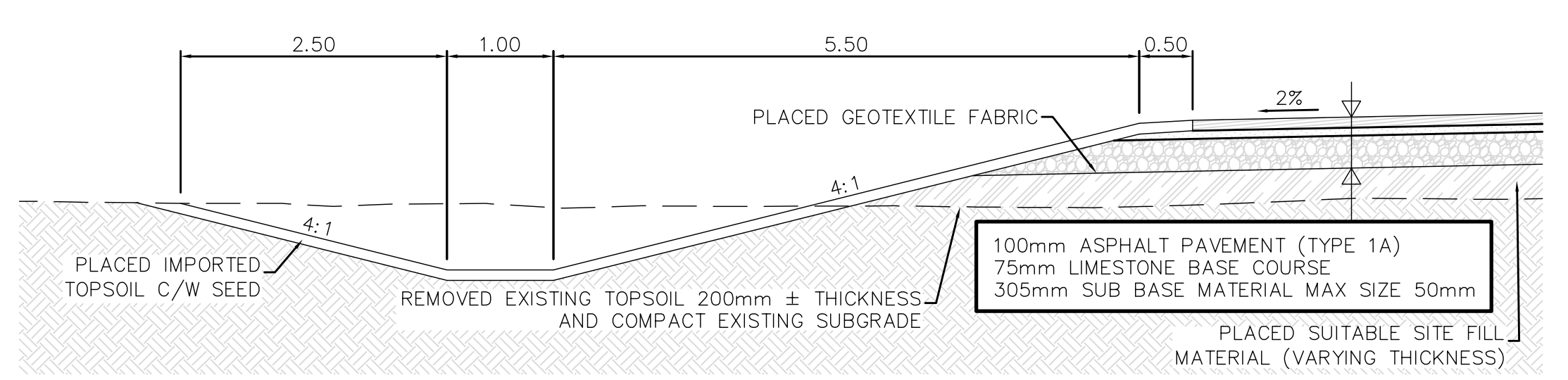


**EAST CENTRELINE ROADWAY PROFILE**

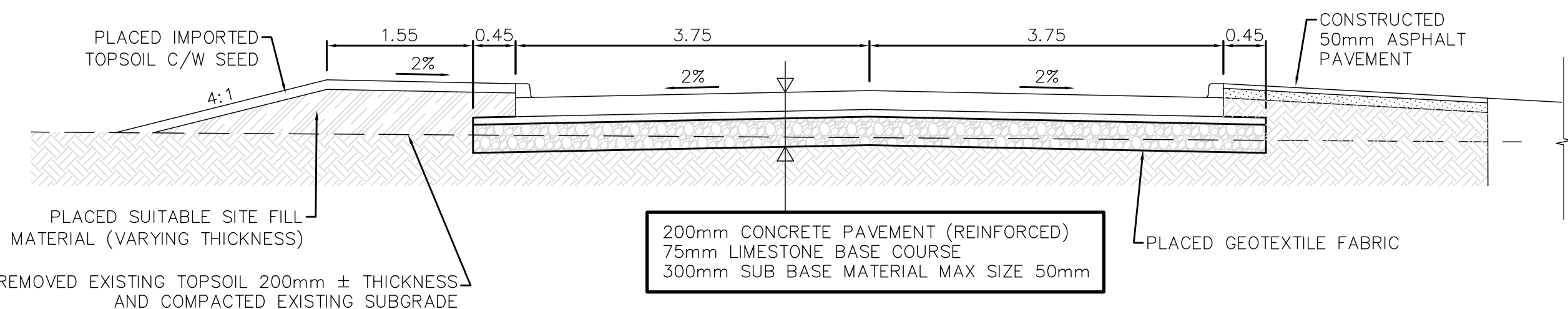
SCALE: 1:500H, 1:20V



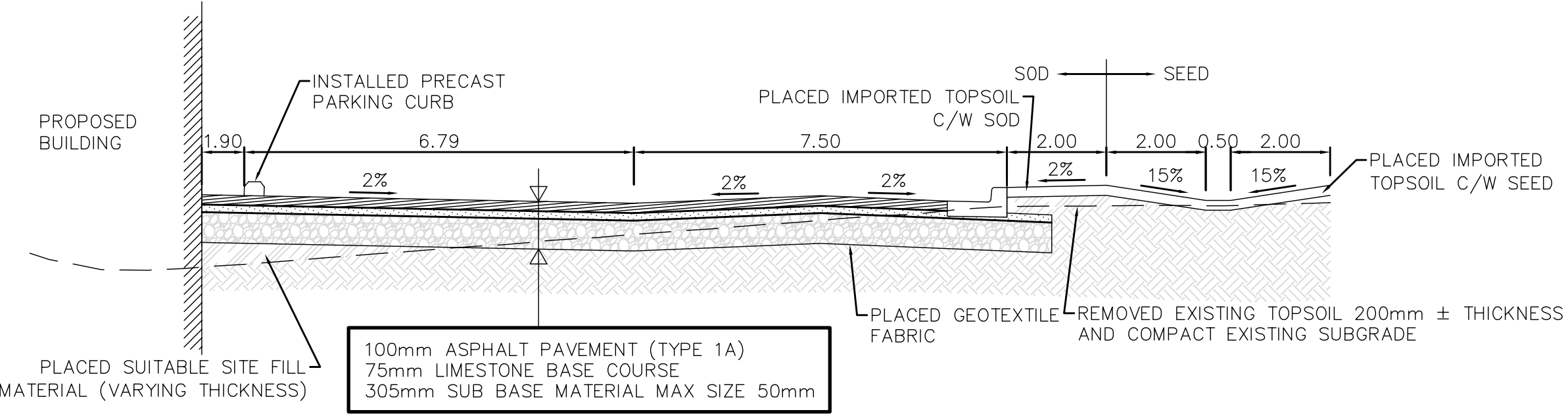
**1 ASPHALT PAVEMENT SECTION DETAIL**  
C8.01 SCALE 1:50



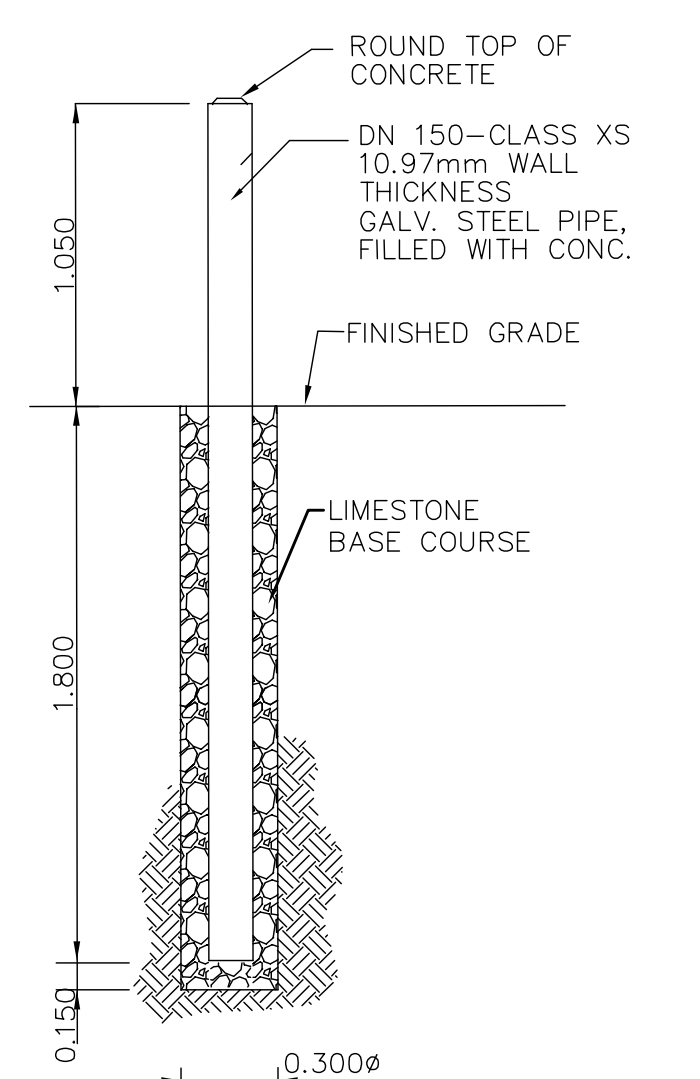
**2 ASPHALT TURNAROUND DETAIL**  
C8.01 SCALE 1:50



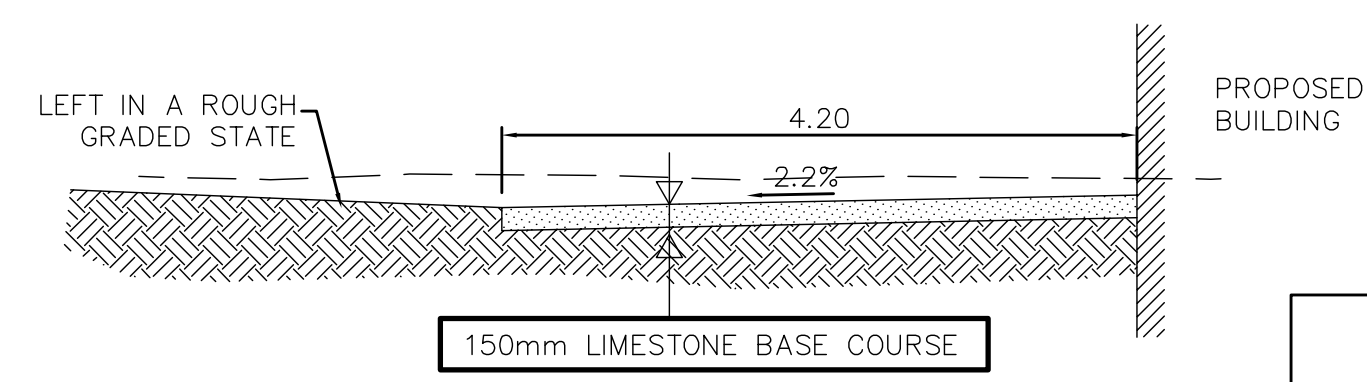
**3 CONCRETE PAVEMENT SECTION DETAIL**  
C8.01 SCALE 1:50



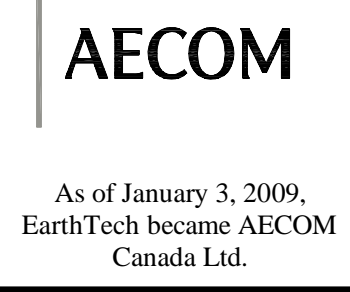
**4 ASPHALT PAVEMENT PARKING DETAIL**  
C8.01 SCALE NTS



**6 BOLLARD DETAIL**  
C8.01 SCALE NTS



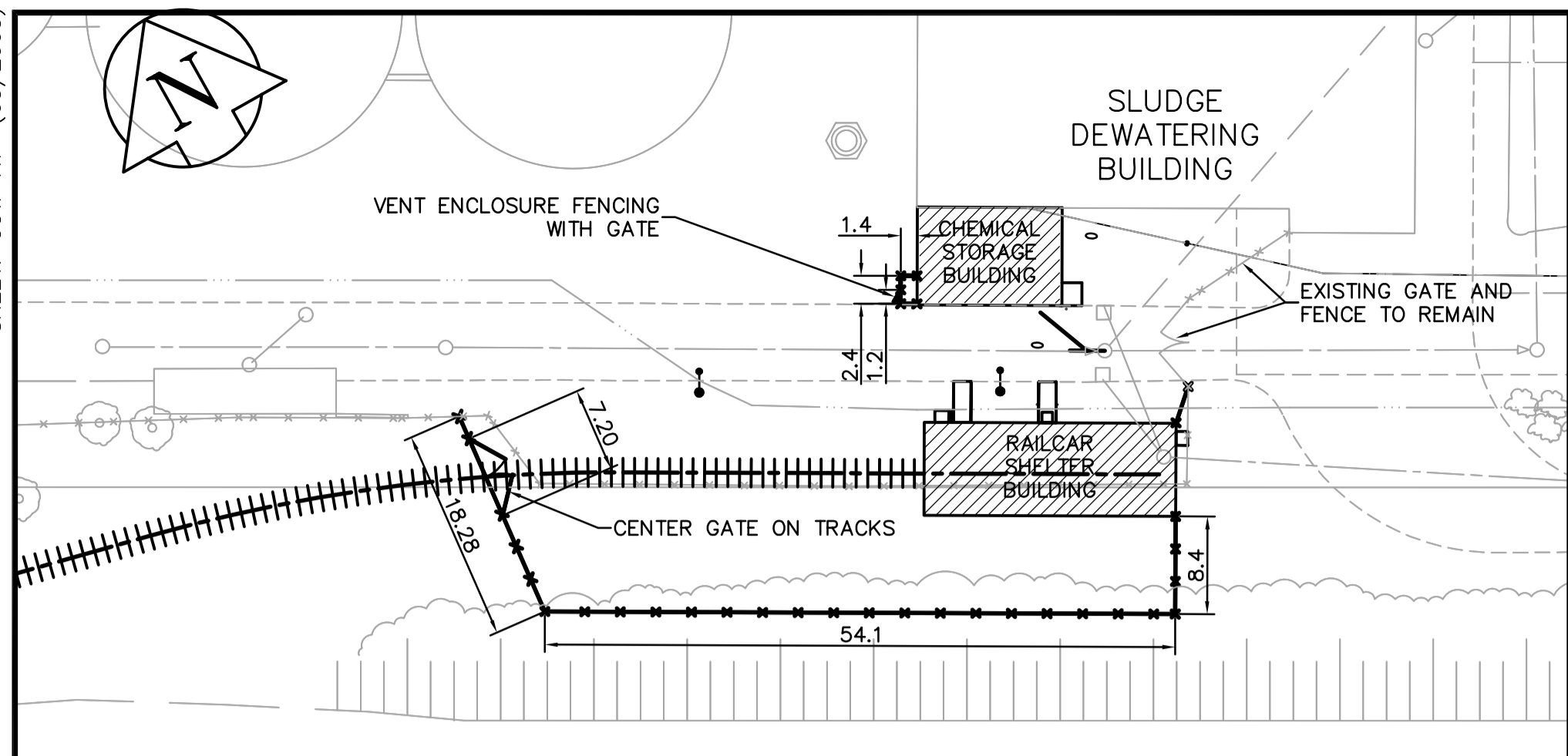
**7 ACCESS ROAD**  
C8.01 SCALE 1:50



**AECOM AS-CONSTRUCTED**

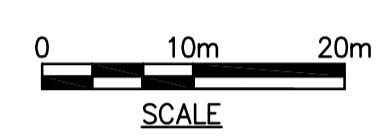


<p><b>AECOM</b></p>				<p>ENGINEER'S SEAL</p>		<p><b>THE CITY OF WINNIPEG</b> WATER AND WASTE DEPARTMENT ENGINEERING DIVISION</p>	
<p>DESIGNED BY: BSK</p>				<p>ORIGINAL SIGNED BY: J.N. CRANG</p>		<p>NEWPC CENTRATE NUTRIENT TREATMENT NITROGEN REMOVAL FACILITY</p>	
<p>CHECKED BY: JC</p>				<p>DATE: 2006/05/15</p>		<p>CITY FILE NUMBER</p>	
<p>DRAWN BY: BSK/RC</p>				<p>APPROVED BY: JEJ</p>		<p>SHEET OF</p>	
<p>SCALE: AS NOTED</p>				<p>RELEASED FOR CONSTRUCTION BY: K.MARTENS</p>		<p>CITY DRAWING NUMBER</p>	
<p>NO. REVISIONS</p>				<p>DATE</p>		<p>CONSULTANT DRAWING NO. C8.02</p>	
<p>DATE: 2006/04/06</p>				<p>DATE: 2006/05/15</p>		<p>CIVIL ROADWAY PROFILES AND DETAILS</p>	
<p>DATE: 2006/05/15</p>				<p>DATE: 2006/05/15</p>		<p><b>1-0101C-C0010-001-02</b></p>	



**FENCING PLAN**

- FENCING NOTES:**
1. CONSTRUCT FENCING IN ACCORDANCE WITH CW3550-R2.
  2. SALVAGE FENCE FABRIC, GATES, AND GATE HARDWARE FOR REUSE. SUPPLY ADDITIONAL FENCE FABRIC AS REQUIRE TO COMPLETE INSTALLATION.
  3. FENCING SHALL BE 2440mm HIGH WITH TOP AND BOTTOM RAILS AND 3 STRAND BARBED WIRE ON ANGLED BRACKETS FACING OUTSIDE PROPERTY EXCEPT AS NOTED.
  4. POSTS SHALL BE SET IN CONCRETE.
  5. SUPPLY HORIZONTAL BRACES AT ALL TERMINAL AND CORNER POSTS.
  6. VENT ENCLOSURE FENCING SHALL BE 1.2m HIGH WITH POSTS SET ON BRACKETS BOLTED TO CONCRETE SLAB.



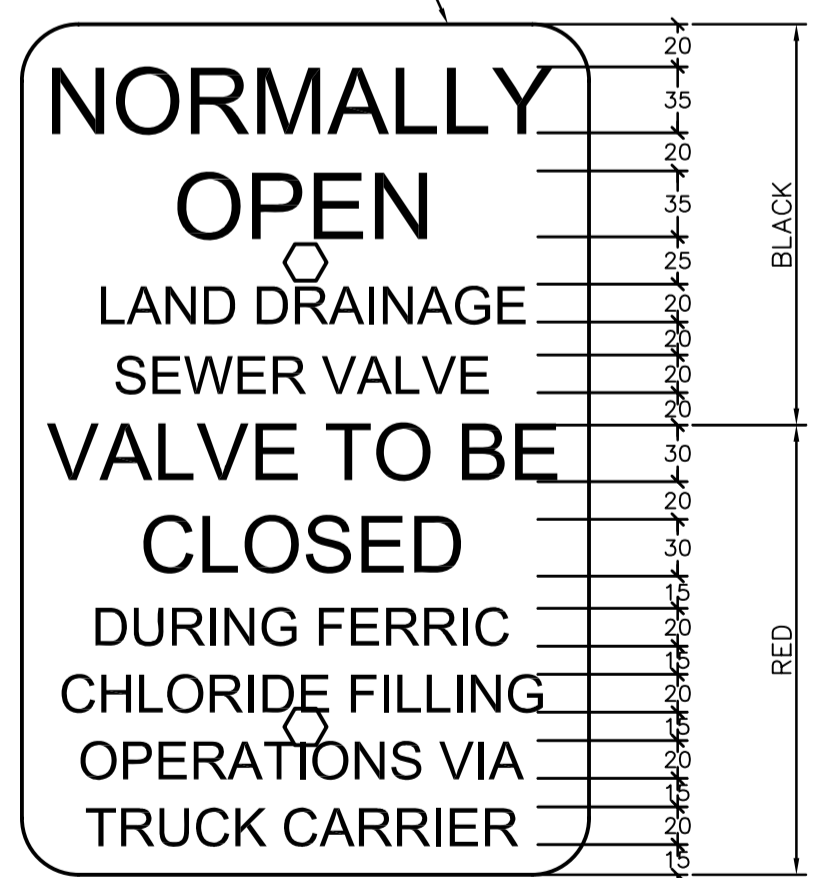
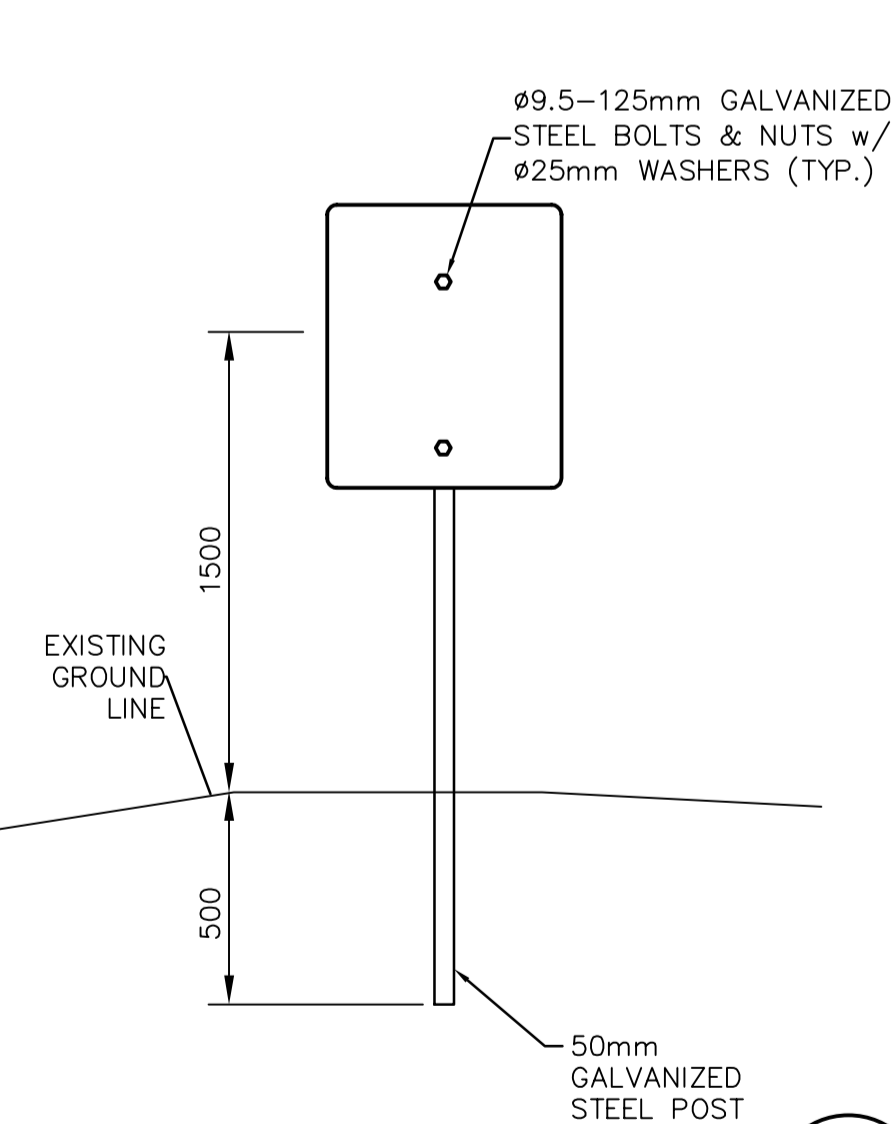
NOTE:  
THIS AS-CONSTRUCTED DRAWING WAS COMPLETED USING THE LATEST INFORMATION RECEIVED FROM THE CONTRACTOR.

**AECOM**

As of January 3, 2009,  
EarthTech became AECOM  
Canada Ltd.

**AECOM AS-CONSTRUCTED**

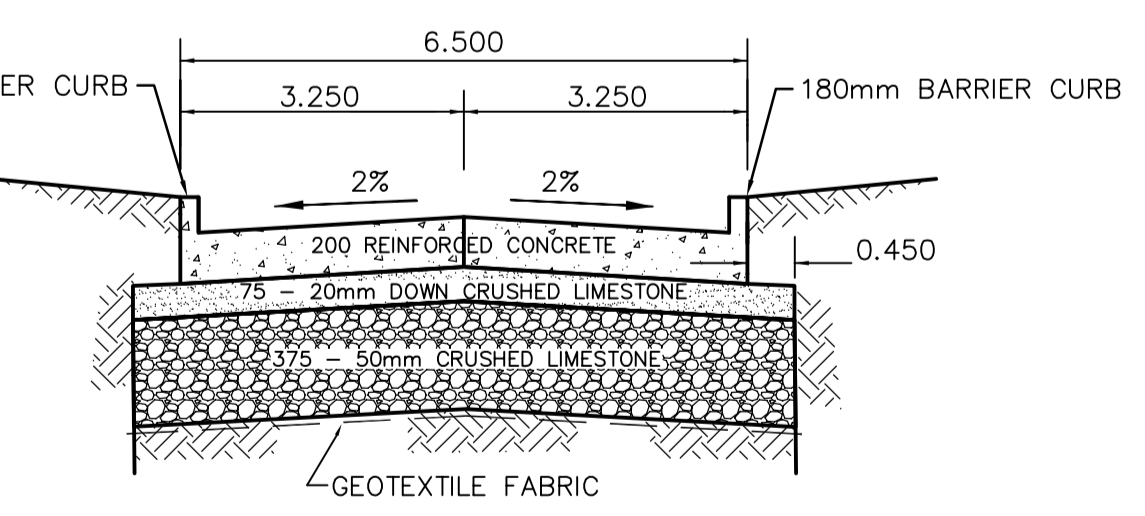
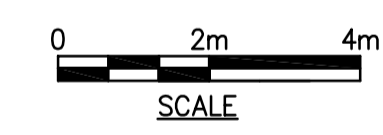
SIG..... DATE.....



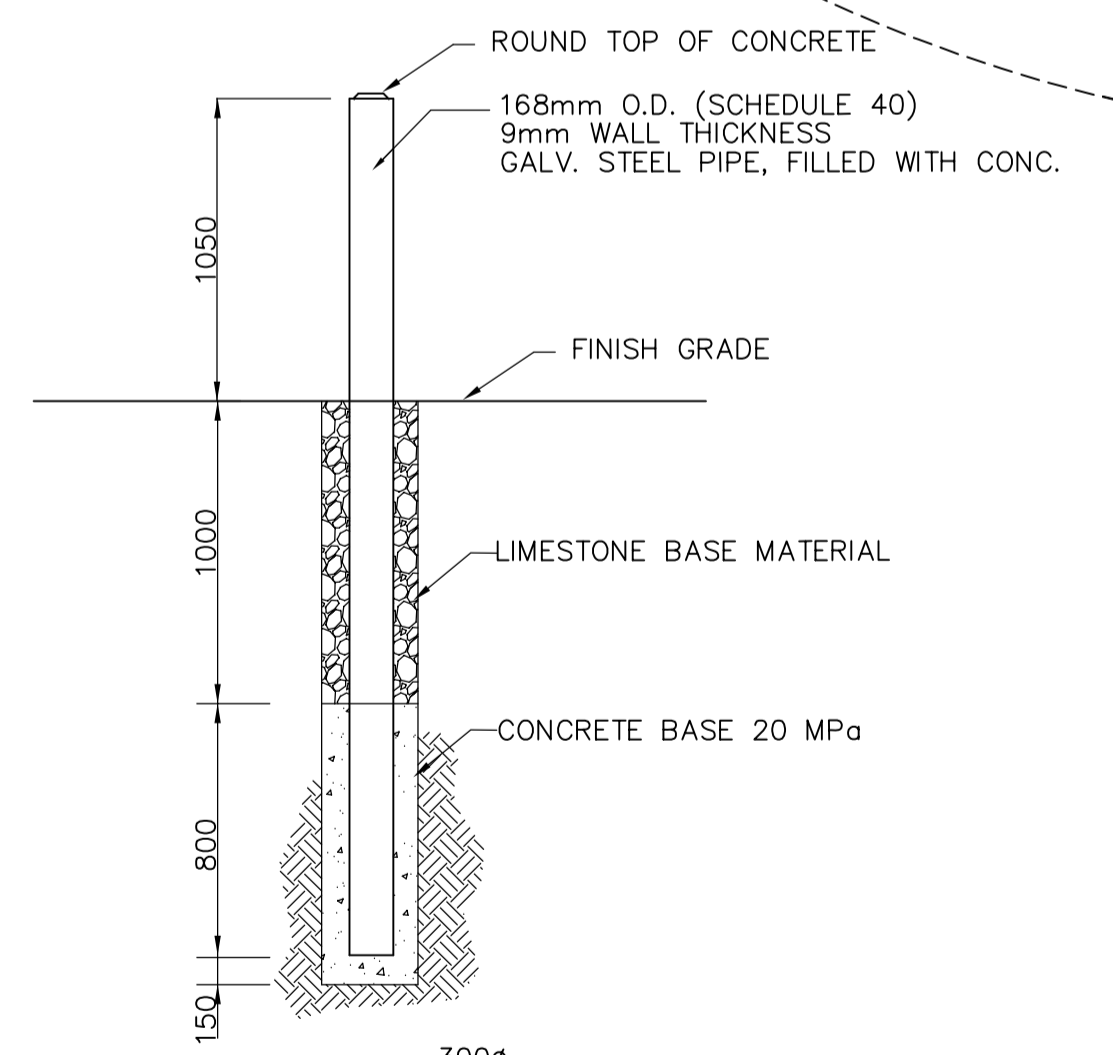
**3 SIGN**  
CC1.02 SCALE NTS

- GENERAL NOTES:**
- A. ALL WORK AND MATERIALS SHALL CONFORM TO THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
  - B. LOCATION OF UTILITIES SHOWN ON DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
  - C. ALL TRENCHES UNDER OR WITHIN 1.0M OF EXISTING OR PROPOSED PAVEMENTS, STRUCTURES OR RAIL TRACKS SHALL BE BACKFILLED WITH CLASS 2 BACKFILL. ALL OTHER TRENCH BACKFILL SHALL BE CLASS 4.
  - D. ALL SEWER AND WATER PIPING TO HAVE NITRILE GASKETS.
  - E. ALL DISTURBED LANDSCAPED AREAS ARE TO BE RESTORED WITH TOPSOIL AND SOD.
  - F. REGRADE AROUND RAILCAR SHELTER FROM 100mm BELOW FINISHED FLOOR GRADE TO EXISTING GROUND ELEVATION AT MINIMUM 5:1 SLOPE.
- UTILITY CONSTRUCTION NOTES:**
1. INSTALL NEW MANHOLE ON EXISTING LAND DRAINAGE SEWER. ABANDON EXISTING LAND DRAINAGE SEWER WEST OF NEW MANHOLE.
  2. REMOVE EXISTING MANHOLE AND INSTALL NEW MANHOLE. RENEW EXISTING SEWER 3.0m WEST OF NEW MANHOLE (SD 022A).
  3. REPLACE EXISTING MOUNTABLE CURB AND GUTTER INLET FRAME AND COVERS WITH NEW BARRIER CURB INLET FRAME. DELIVER SALVAGED FRAMES AND COVERS TO WATER SERVICES DIVISION YARD, 552 PLINGUET STREET.
  4. RECONSTRUCT ALL REMOVED PAVEMENT AS SHOWN ON DETAIL 1-CC1.02.
  5. CONSTRUCT 1.5m WIDE SIDEWALK.
  6. CONNECT EXISTING CB LEAD TO NEW MANHOLE. ABANDON CB LEAD SOUTH OF NEW MANHOLE.
  7. GRADE, TOPSOIL AND SOD BOULEVARD AREAS TO ELEVATIONS SHOWN.
  8. RESTORE ALL OTHER BOULEVARD AREAS TO A CONDITION EQUAL TO OR BETTER ORIGINAL CONDITION.

**UTILITIES PLAN**



**TYPICAL PAVEMENT CROSS-SECTION**  
NOT TO SCALE



**2 BOLLARD**  
CC1.02 SCALE NTS

EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED
150 mm W.M.	WATERMAIN	150 mm W.M.	HYDRO	M.T.S.	ANCHOR	Light Standard	ANCHOR	
300mm L.D.S.	LAND DRAINAGE SEWER	300mm L.D.S.	CONCRETE	PROPERTY LINE	POLE	CONTOURS	POLE	
250mm W.W.S.	WASTEWATER SEWER	250mm W.W.S.	ASPHALT	SURVEY BAR	RAIL X-ING SIGNAL	RAILWAY TRACK	RAIL X-ING SIGNAL	
	MANHOLE		ELEVATION	TREE	DITCH	DITCH	DITCH	
	CATCH BASIN		ANODE	CONCRETE SIDEWALK	SWALE	SWALE	SWALE	
	CURB INLET		FENCE	FENCE	COMPRESSED AIR	COMPRESSED AIR	COMPRESSED AIR	
	JUNCTIONS							
	CULVERT							
	GAS							

**AECOM**  
Certificate of Authorization  
AECOM Canada Ltd.  
Original dated on:  
No. 4671 Date: 2005/12/02

NO.	REVISIONS	DATE	BY	DATE	BY
02	AS CONSTRUCTED	09/07/16	DEP		
01	ISSUED FOR CONSTRUCTION	06/03/24	JBC		
00	ISSUED FOR TENDER	05/12/2	GSK		

**EarthTech**  
A Tyco International Ltd. Company

DESIGNED BY: GSK	CHECKED BY: JEJ
DRAWN BY: MAF	APPROVED BY: D. TANIGUCHI
SCALE: AS NOTED	RELEASED FOR CONSTRUCTION BY: K. MARTENS
DATE: 2005/10/12	DATE: 05/12/02

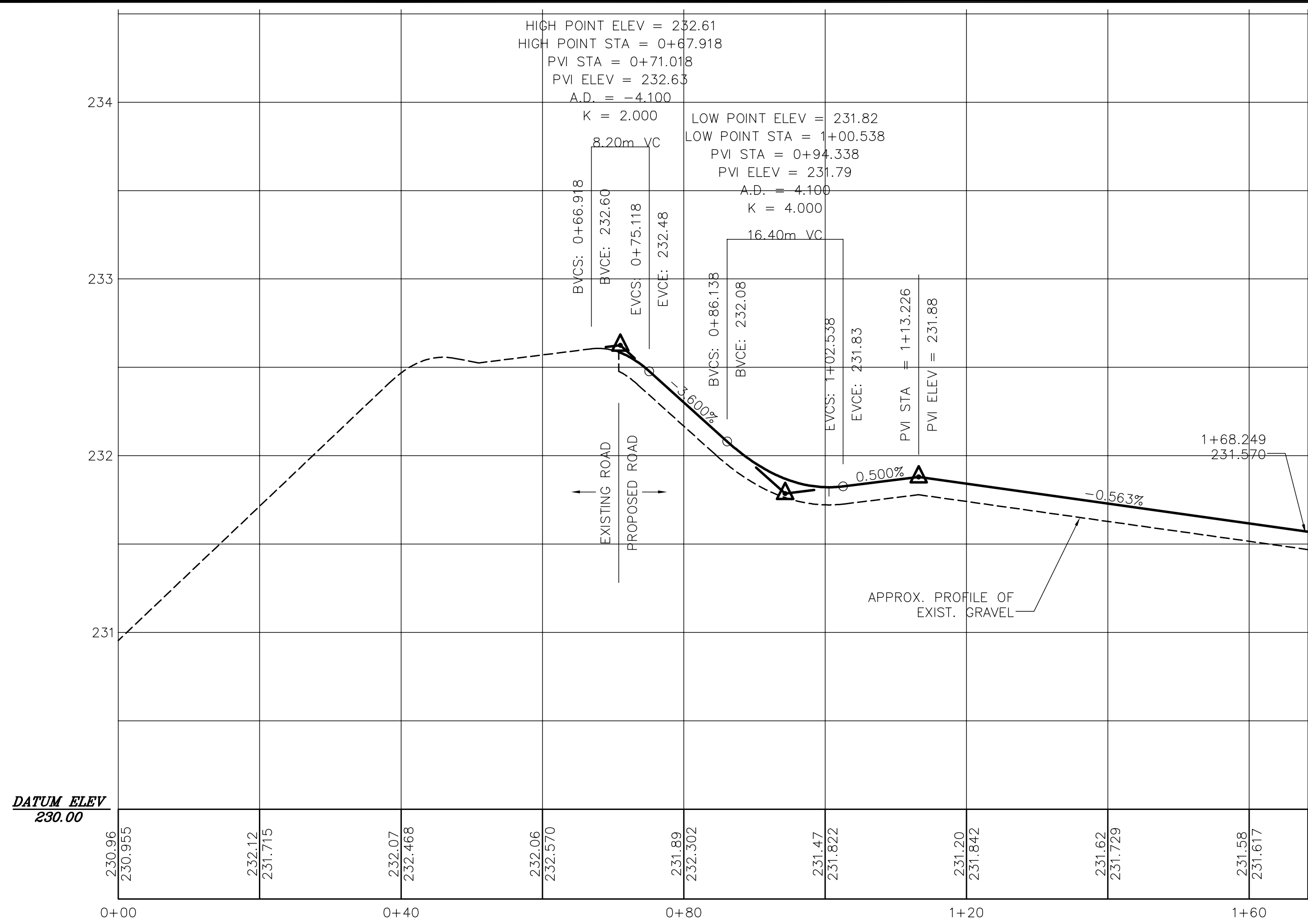
**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT  
ENGINEERING DIVISION

NEWPC CENTRATE NUTRIENT TREATMENT  
PHOSPHORUS REMOVAL FACILITY  
CONTRACT No. 1

CIVIL  
SITE UTILITIES  
AND DETAILS

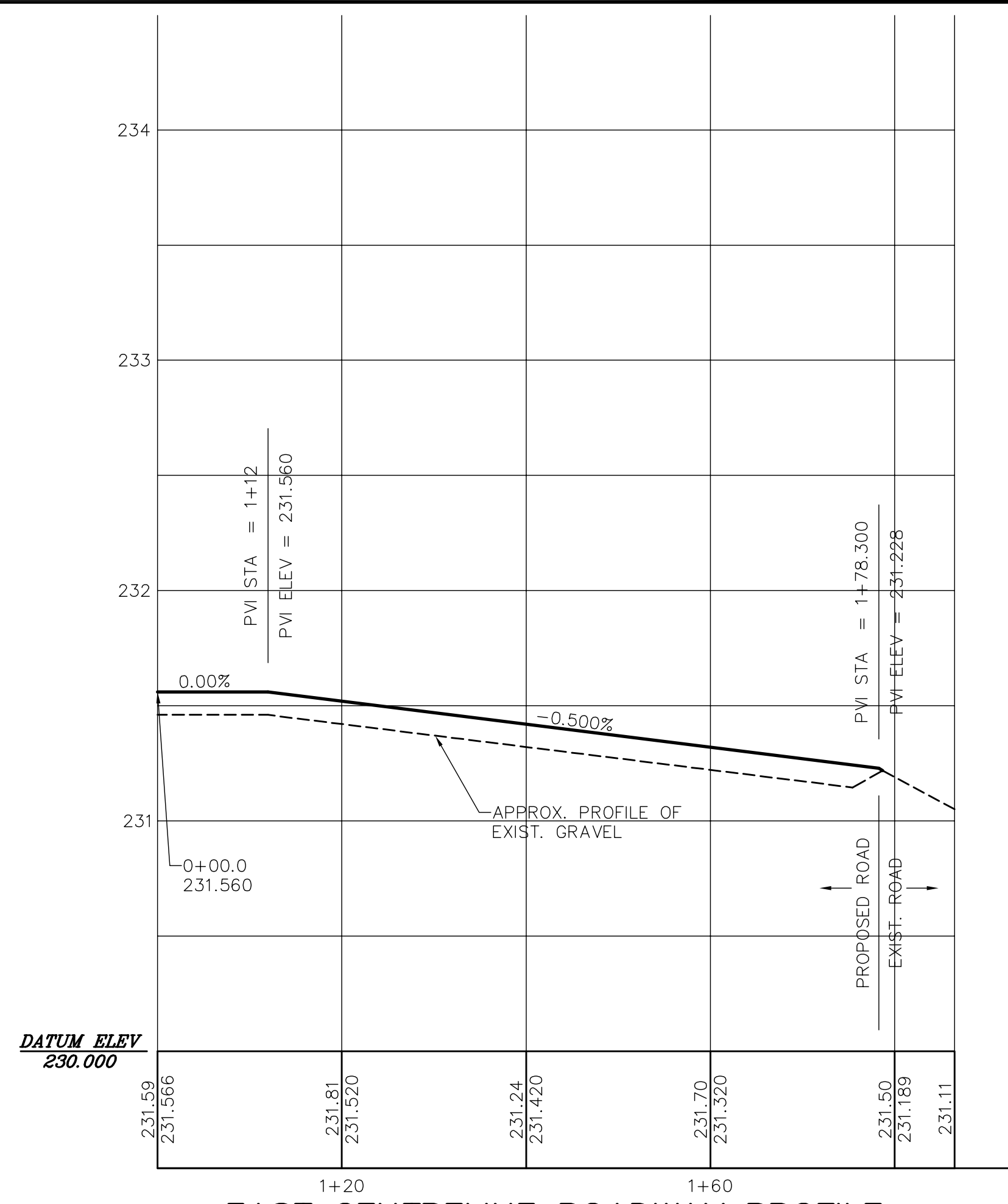
ENGINEER'S SEAL  
ORIGINAL SIGNED BY: J.E. HUTCHISON  
2005/12/02

CITY FILE NUMBER  
SHEET OF  
CITY DRAWING NUMBER  
1-0101F-C0002-001-02



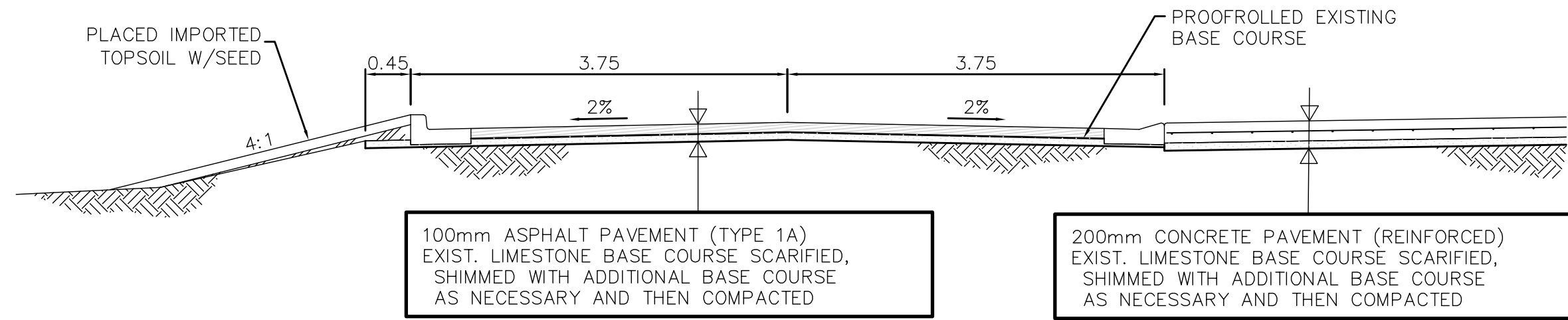
**WEST AND SOUTH ROADWAY CENTRELINE PROFILE**

SCALE: 1:500H, 1:20V

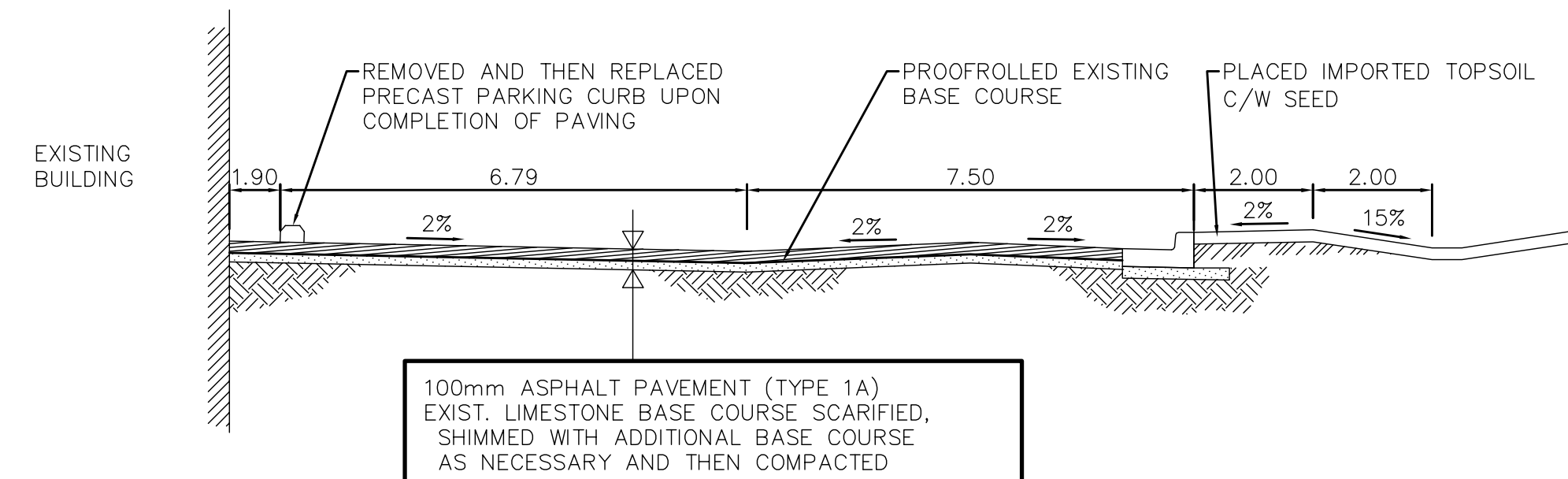


**EAST CENTRELINE ROADWAY PROFILE**

SCALE: 1:500H, 1:20V



**1 ASPHALT PAVEMENT SECTION DETAIL**  
C8.03 SCALE 1:50



**2 ASPHALT PAVEMENT PARKING DETAIL**  
C8.03 SCALE NTS

**AS-CONSTRUCTED NOTE:**

THIS DRAWING WAS ISSUED TO THE CONTRACTOR AS CHANGE ORDER 26 IN AUGUST 2009. THE WORKS OUTLINED WITHIN THIS DRAWING WERE COMPLETED IN OCTOBER 2009, APPROXIMATELY ONE YEAR FROM THE COMPLETION OF FACILITY CONSTRUCTION. THE DELAY IN COMPLETION OF SURFACE WORKS WAS TO ALLOW FOR THE SOIL SETTLEMENT. SEE C8.02 FOR COMPLETE AS-CONSTRUCTED INFORMATION.

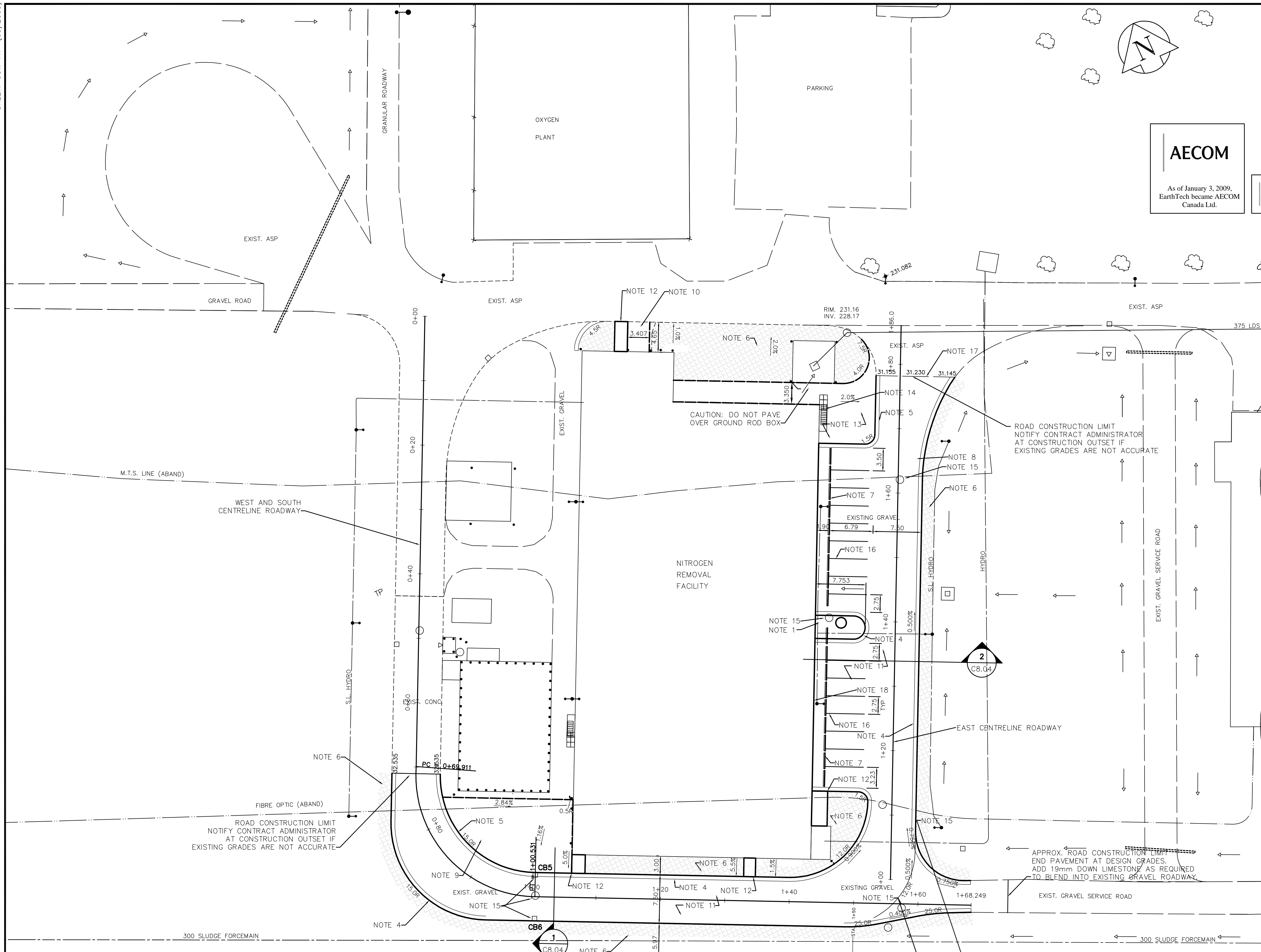


**AECOM**

As of January 3, 2009, EarthTech became AECOM Canada Ltd.

**AECOM AS-CONSTRUCTED**  
SIG. \_\_\_\_\_ DATE \_\_\_\_\_

B.M. ELEV.		<b>AECOM</b>		ENGINEER'S SEAL		<b>THE CITY OF WINNIPEG</b> WATER AND WASTE DEPARTMENT ENGINEERING DIVISION		CITY FILE NUMBER	
				DESIGNED BY: JC				ORIGINAL SIGNED BY: J.N. CRANG	
		DRAWN BY: RMC		APPROVED BY: DJT		2009/07/23		NEWPCC CENTRATE NUTRIENT TREATMENT NITROGEN REMOVAL FACILITY	
1 AS-CONSTRUCTED DRAWING 05/11/09 RC		SCALE: AS NOTED		RELEASED FOR CONSTRUCTION BY: C. CARROLL		CONSULTANT DRAWING NO. C8.04		CITY DRAWING NUMBER 1-0101C-C0012-001-01	
0 ISSUED FOR CCN No. 26 23/07/09 JNC		DATE: 2009/07/16		DATE:				CIVIL ROADWAY PROFILES AND DETAILS	
NO. REVISIONS		DATE		BY					



**AECOM**  
As of January 3, 2009,  
EarthTech became AECOM  
Canada Ltd.

**AECOM AS-CONSTRUCTED**  
SIG. \_\_\_\_\_ DATE \_\_\_\_\_

- REFERENCE NOTES:**
- ALL WORKS CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
  - ADD 200.000 TO OBTAIN GEODETIC DATUM.
  - PAVEMENT DIMENSIONS ARE TO BACK OF CURB.
  - ALL SURVEY LAYOUT AND QUALITY CONTROL TESTING PROVIDED BY CONTRACTOR.

- CONSTRUCTION NOTES:**
- PLATE COMPACTED 19mm CRUSHED LIMESTONE TO 100% STANDARD PROCTOR DENSITY TO WITHIN 100mm TOP OF MEDIAN CURB, THEN PLACED A PROPEX 861 (OR EQUIVALENT) NON-WOVEN GEOTEXTILE UNDER 100mm OF 25mm CLEAN CRUSHED LIMESTONE.
  - PROOF ROLLED EXISTING BASE COURSE MATERIAL IN PROPOSED PAVEMENT AREAS. IF SOFT AREAS FOUND, EXTENDED EXCAVATION EITHER TO THE LOWER LIMIT OF THE UNSUITABLE MATERIAL OR TO A DEPTH AS DIRECTED BY THE CONTRACT ADMINISTRATOR. BACKFILLED AND COMPACTED EXCAVATED AREAS WITH 50mm DOWN LIMESTONE MATERIAL AND TOPPED WITH 19mm DOWN LIMESTONE MATERIAL WITHIN 75mm OF EXISTING SURFACE.
  - SCARIFIED EXISTING BASE COURSE THEN RECOMPACTED TO 100% STANDARD PROCTOR DENSITY. ADDITIONAL BASE COURSE, IF REQUIRED, WAS PLACED AND COMPACTED AT THIS TIME.
  - INSTALLED NEW BARRIER CURB AND GUTTER (150mm HEIGHT).
  - INSTALLED NEW LIP CURB AND GUTTER (75mm HEIGHT).
  - SUPPLIED AND PLACED IMPORTED TOPSOIL AND SOD.
  - REMOVED PRECAST PARKING CURB AND THEN REPLACED ONCE PAVING WAS COMPLETED. DAMAGED CURBS WERE REPLACED.
  - RELOCATED STEEL POLES LYING ON ROADWAY TO GREENSPACE EAST OF ROADWAY.
  - CONSTRUCTED NEW 200mm REINFORCED CONCRETE PAVEMENT.
  - CONSTRUCTED NEW 150mm REINFORCED CONCRETE PAVEMENT.
  - CONSTRUCTED NEW 100mm ASPHALTIC CONCRETE ROADWAY.
  - CONSTRUCTED NEW 100mm CONCRETE SIDEWALK.
  - CONSTRUCTED NEW 50mm ASPHALTIC CONCRETE ACCESS ROAD c/w 20mm LIMESTONE BASE COURSE (150mm THICK).
  - REMOVED AND SALVAGED EXISTING PATIO BLOCKS. NEWPCC STAFF REMOVED FROM SITE.
  - ADJUSTED MANHOLE AND CATCHBASIN TO FINISHED ASPHALT SURFACE.
  - PAINTED PARKING LINES (2.75m TYPICAL SPACING).
  - SAWOUT EXISTING ASPHALT EDGE.
  - PROTECTED ELECTRICAL OUTLETS ALONG EAST FACE OF BUILDING.

**AS-CONSTRUCTED NOTE:**  
THIS DRAWING WAS ISSUED TO THE CONTRACTOR AS CHANGE ORDER 26 IN AUGUST 2009. THE WORKS OUTLINED WITHIN THIS DRAWING WERE COMPLETED IN OCTOBER 2009, APPROXIMATELY ONE YEAR FROM THE COMPLETION OF FACILITY CONSTRUCTION. THE DELAY IN COMPLETION OF SURFACE WORKS WAS TO ALLOW FOR THE SOIL SETTLEMENT. SEE C8.01 FOR COMPLETE AS-CONSTRUCTED INFORMATION.

**SURFACE TYPE LEGEND**

	CONCRETE PAVEMENT		GRANULAR MATERIAL
	NEW ASPHALT PAVEMENT		
	75mm IMPORTED TOPSOIL C/W SEED		

**APECM**  
Certificate of Authorization  
AECOM Canada Ltd.  
Original dated on:  
No. 4671 Date: 2010/04/30

13-027 W. side Main St. on the grounds of the North End B.M. Treatment Plant, 10ft. on top of Conc. pit in front of main bldg., 22.3m E. of line of most Ely. wall & 32.8m S. of most Nly. wall of main bldg. (ties to 1011) ELEV. = 231.261m

NO.	REVISIONS	DATE	BY
1	AS-CONSTRUCTED DRAWING	09/11/05	RC
0	ISSUED FOR CCN No. 26	09/07/23	JNC

**AECOM**

DESIGNED BY	JC	CHECKED BY	JC
DRAWN BY	RMC	APPROVED BY	DJT
SCALE:	1:300	RELEASED FOR CONSTRUCTION BY:	C. CARROLL
DATE	2009/07/16	DATE	

ENGINEER'S SEAL

ORIGINAL SIGNED BY	J.N. CRANG
	2009/07/23
CONSULTANT DRAWING NO.	C8.03

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT  
ENGINEERING DIVISION

NEWPCC CENTRATE NUTRIENT TREATMENT NITROGEN REMOVAL FACILITY

CIVIL  
POST SETTLEMENT PAVING AND GRADING PLAN

CITY FILE NUMBER  
SHEET OF  
CITY DRAWING NUMBER  
1-010C-C001F-001-01